

Abstract 598**TITLE:** Cost-Effectiveness of Methadone Treatment as HIV Prevention**AUTHORS:** Pollack, H (University of Michigan)

BACKGROUND/OBJECTIVES: The cost-effectiveness of HIV prevention programs and clinical interventions is an important policy concern. Several interventions have been investigated. However, drug treatment is rarely analyzed as a specific HIV prevention measure. This study explores the cost-effectiveness of outpatient methadone maintenance in reducing the rate of new infections.

METHODS: This analysis uses compartmental models to explore the cost-effectiveness of methadone maintenance as an HIV prevention strategy. Linking data on the economics of substance abuse treatment to a simplified, but plausible epidemiological model of HIV spread, it computes costs per averted infection of a representative outpatient program.

RESULTS: In IDU populations with high rates of stranger needle-sharing, methadone treatment compares favorably with many prevention interventions. In the baseline model, methadone treatment is found to reduce HIV incidence at an average cost of between \$100,000 and \$300,000 per infection averted. Cost-effectiveness depends strongly upon the rate of stranger-sharing among active IDUs. Epidemiological models also reveal important scale economies: Methadone maintenance is most cost-effective in reducing HIV prevalence when treatment reaches a large fraction of IDUs within a given community. Speculative extensions to the baseline model consider treatment for high-risk individuals such as poly-drug users and dual-diagnosis patients. Empirically reasonable simulations indicate that services to these populations are often cost-effective despite high relapse rates and additional costs associated with these sub-populations. Methadone maintenance appears slightly less cost-effective than needle exchange and other low-intensity primary prevention efforts.

CONCLUSIONS: Viewed solely as an HIV prevention intervention, methadone maintenance compares favorably with many interventions policymakers and the American public value to save and extend life. Although methadone maintenance appears less cost-effective than some low-intensity interventions, drug treatment for active injectors provides additional social benefits to improve patient health and social performance. Treatment therefore addresses a broader social agenda strongly valued in many communities affected by injection drug use.

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